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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/198,022	11/23/98	RHOADS	G 4830-51475/W
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023735
DIGIMARC CORPORATION
19801 SW 72ND AVENUE
SUITE 100
TUALATIN OR 97062

WM31/1108

EXAMINER

JOHNS, A
ART UNIT PAPER NUMBER

2621
DATE MAILED:

19
11/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/198,022	Applicant(s) RHOADS	
	Examiner Andrew W. Johns	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Upon review of applicant's statement of related applications on page 1 of the specification, it is noted that applicant has indicated that this application is a continuation-in-part (CIP) of application S.N. 08/327,426, which is a CIP of 08/215,289, which is a CIP of 08/154,866. However, application S.N. 08/327,426 was not pending on the date the instant application was filed (i.e., 23 November 1998). Application S.N. 08/327,426 issued as Patent No. 5,768,426 on 16 June 1998, which is more than five months prior to the filing of the instant application. If applicant desires to claim priority to application S.N. 08/327,426 and its parent applications, it is suggested that parent application S.N. 08/512,993 be identified as a continuation-in-part of application S.N. 08/327,426 (this priority is consistent with the information printed on Patent No. 5,841,886, which issued from the child application of 08/512,993). Therefore, it is suggested that the statement of related applications on page 1 of the specification should read:

This application is a continuation of application S.N. 08/763,847, filed December 4, 1996, now Pat. No. 5,841,886, which is a continuation of application S.N. 08/512,993, filed August 9, 1995, now abandoned, which is a continuation-in-part of application S.N. 08/436,098, filed May 8, 1995, now Pat. No. 5,636,292, and a continuation-in-part of application S.N. 08/436,099, filed May 8, 1995, now Pat. No. 5,710,834, and a continuation-in-part of application S.N. 08/436,102, filed May 8, 1995, now Pat. No. 5,748,783, and a continuation-in-part of application S.N. 08/436,134, filed May 8, 1995, now Pat. No. 5,748,763, and a continuation-in-part of application S.N. 08/438,159, filed May 8, 1995, now Pat. No. 5,850,481, and a continuation-in-part of application S.N. 08/327,426, filed October 21, 1994, now Pat. No. 5,768,426, which is a continuation-in-part of application S.N. 08/215,289, filed March 17, 1994, now abandoned, which is a continuation-in-part of application S.N. 08/154,866, filed November 18, 1993, now abandoned.

This proposed paragraph also updates the current status of all of the priority applications, and modifies the language to better conform to the language suggested in M.P.E.P. § 201.11.

2. Additionally, it is noted that while the applicant has claimed priority to applications filed as early as 18 November 1993, a careful review of the disclosures in the various priority applications indicates that the invention stipulated by the instant claims was not fully disclosed until 08 May 1995. Specifically, none of the priority applications filed prior to that date describe
5 a security document that has both text and a graphic on a substrate, the graphic being steganographically encoded to secretly convey plural bits of digital data, as set forth in claim 1. Similarly, none of the priority applications filed prior to 08 May 1995 sets forth a photo ID that includes a photograph on a substrate, the photograph having multi-bit information steganographically encoded therein, as defined by claim 17. Because the priority applications
10 filed prior to 08 May 1995 fail to describe steganographically encoding plural bit information into a graphic or photograph on a security document or photo ID, these applications fail to show that the applicant was in possession of the claimed invention, at the time of the filing of these applications. Therefore, the effective filing date of the instant claims is considered to be 08 May 1995.

15 *Response to Arguments*

3. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form
20 the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-4, 6-7 and 16-17 are rejected under 35 U.S.C. § 102(a) as being anticipated by Kawakami et al. (EP 0 642 060 A2).

Kawakami et al. teaches a security document (i.e., an ID card; page 8, line 8) that includes a substrate (as shown in Figure 20A, the card includes a substrate that carries additional information), text printed on the substrate (identification number, for example; page 8, line 18), a graphic carried by the substrate (i.e., the photograph shown in Figure 20A), the graphic conveying a visual impression to human viewers thereof (i.e., the image of a card owner), the graphic additionally being steganographically encoded (page 8, lines 9-10; specified information is embedded on card by overlapping the photograph; the embedding process is substantially imperceptible to a viewer; page 8, lines 23-25) to secretly convey plural bits of digital data (page 8, line 20; up to 72 bits can be embedded) recoverable by computer analysis of said graphic (page 8, lines 5-7), as stipulated by claim 1. In addition, Kawakami et al. also teaches that the graphic is a photographic image (page 8, line 9) as variously required by claims 2-3; that the digital data correspond to at least part of the printed text (page 8, lines 16-20; specified information can correspond to the identification number of the card), as required by claim 4; that the steganographic encoding does not visibly interrupt the graphic (page 8, lines 23-25), as defined in claim 6; that the document be an identity document (page 8, line 8), as stipulated by claim 16; and that the steganographic encoding add noise to the graphic (page 7, line 58 through page 8, line 4; the additional information is extracted using filters to detect noise-like components added to the image), the noise not perceptible as a representation of the plural bit digital data except by computer analysis, wherein the encoded graphic does not appear to convey digital data to human viewers thereof (page 6, lines 23-30; page 8, lines 23-25; the encoding should not affect the visual characteristics of the image, so that the image should not appear to

convey digital data), as set forth in claim 7. Finally, Kawakami et al. teaches a photo ID (page 8, line 8) that includes a photograph on a substrate (Figure 20A), the photograph portraying an individual (i.e., the card owner), multi-bit information (page 8, line 20; up to 72 bits can be embedded) steganographically encoded within the photograph (page 8, lines 9-10; specified information is embedded on card by overlapping the photograph; the embedding process is substantially imperceptible to a viewer; page 8, lines 23-25), said steganographic encoding not visibly interrupting the photograph (page 8, lines 23-25), wherein said encoding of the photograph serves to add noise thereto (page 7, line 58 through page 8, line 4; the additional information is extracted using filters to detect noise-like components added to the image), but this noise is not perceptible as a representation of the multi-bit information except by computer analysis, wherein the encoded photograph appears to convey only a image of the individual to human viewers thereof (page 6, lines 23-30; page 8, lines 23-25; the encoding should not affect the visual characteristics of the image, so that the image should not appear to convey digital data), as required by claim 17. Therefore, Kawakami et al. meets each of the limitations of these claims and anticipates the claimed invention.

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 8-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami et al. as applied to claims 1-4, 6-7 and 16-17 above, and further in view of Wang et al. (US 5,471,533 A).

5 Kawakami et al. meets a number of the limitations of the claimed invention, as pointed out more fully above. In addition, claims 9-11 and 13-15 correspond to claims 2-4, 6-7 and 16, and include limitations that are similarly taught by Kawakami et al. However, Kawakami et al. fails to specifically teach that the printed text on the document and the steganographically encoded data cooperate to verify the authenticity of the document, as further stipulated by claim 8, or that the digital data serve as an index to a registry containing additional information, as
10 variously required by claims 5 and 12.

Wang et al. teaches a security document such as a photo ID (Figure 1A) which includes information that is steganographically encoded thereon (pattern can be printed in an ink that is transparent to visible light; column 4, lines 1-3), and further suggests that the information steganographically encoded on the document can cooperate with the information printed visibly
15 on the document to verify the authenticity of the document (column 4, lines 19-32). Because both Wang et al. and Kawakami et al. are directed towards preventing illicit modifications to security documents, and because Wang et al. shows the advantages of cooperation between the encoded data and the visible text data on a document, it would have been obvious to one of ordinary skill in the art to include such a relationship in the encoded information in Kawakami et
20 al. to provide better security against document modifications.

In addition, Wang et al. teaches that the digital data can serve as an index to a registry that includes additional information (column 9, lines 51-57). Because the use of the digital data to index such a registry allows for tracking of the security documents, thereby providing

additional security for the documents, it would have further been obvious to one of ordinary skill in the art to use the encoded information in Kawakami et al. to index a similar registry so as to keep track of the security documents. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention by applicant.

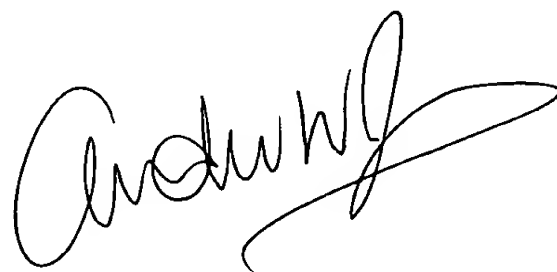
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03.)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number this art unit is (703) 872-9314. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Customer Service Office whose telephone number is (703) 306-0377.

A. Johns
November 6, 2001



ANDREW W. JOHNS
PRIMARY EXAMINER